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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,018

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Xiaohong Sun

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

SEDIGHIAN, REZA

ART UNIT

PAPER NUMBER

2613

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/560,018	<b>Applicant(s)</b> SUN ET AL.	
	<b>Examiner</b> M. R. Sedighian	<b>Art Unit</b> 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-16 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/8/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 4-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Araki (US Patent No: 5,777,772) in view of McCarthy et al. (US Patent No: 4,320,388).

Regarding claim 1, Araki teaches a light emitting system (figs. 2, 4) for illumination and data transmission (Data, figs. 2, 4), comprising: a LD driver (LD Driver, fig. 2 and 3, fig. 4) operable to provide a control signal and a plurality of LD currents (col. 1, lines 65-67); an electronic switch (Channel Select Circuit, fig. 2 and 4, fig. 4) in electrical communication with the LD driver (LD Driver, fig. 2) to receive the control signal (col. 3, lines 31-46); an illumination unit (25, fig. 2) including a plurality of LD light sources (col. 3, lines 17-20 and LDs light sources 1, shown in fig. 4), wherein a first LD light source (1, fig. 4) is in electrical communication with the LD driver (3, fig. 4) to facilitate a flow of a first LD current from the LD driver through the first LD light source (col. 3, lines 20-30) whereby the first LD light source (1, fig. 4) emits a first light output ( $\lambda_1$ , fig. 3) in response to the flow of first LD current through the first LD light source (col. 3, lines 20-24), and wherein a second LD light source (the second LD light source, shown in fig. 4) is in electrical communication with the electronic switch (4, 5-2, fig. 4) to facilitate a flow of a second LD current (col. 3, lines 19-20) from the LD driver (3, fig. 4) through the second LD light source (the second LD light source 1, shown in fig. 4) whereby the second LD light source emits a second light output ( $\lambda_2$ , fig. 3) in response to the flow of the second LD current through the second LD light source (col. 4, lines 44-59); and

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wherein the electronic switch (4, fig. 4) is operable to one of facilitate or impede the flow of the second LD current from the LD driver through the second LD light source as a function of the control signal (col. 1, lines 5-9, col. 6, lines 20-21). Araki differs from the claimed invention in that Araki does not disclose the light sources are LEDs. However, the use of LDs or LEDs for transmitting optical signals are well known. For example, McCarthy teaches using LEDs (40, fig. 2) to transmit optical signals (col. 2, lines 58-59). As it is taught by McCarthy, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate LEDs, for the transmitting light sources in the transmission system of Araki to provide a cheaper and simpler optical transmission system.

Regarding claim 4, McCarthy teaches a first LED light source (col. 2, lines 58-59, 63-64).

Regarding claim 5, Araki teaches the first LD light source (1, fig. 4) further includes a capacitor (10, fig. 4).

Regarding claim 6, McCarthy teaches a second LED light source (col. 2, lines 63-64).

Regarding claim 7, Araki teaches the second LD light source further includes a capacitor (the second LD light source further connected to a capacitor 10, shown in fig. 4).

Regarding claim 8, Araki teaches the light source (LDs light sources 1, shown in figs. 4, 7) connected in series to the electronic switch (note that LDs are connected in series and further connected to electronic switch, as it is shown in figs. 2 and 4).

Regarding claim 9, Araki teaches the series connection of the light source (25, fig. 2) and the electronic switch (27, fig. 2 and 4, fig. 4) is connected to the LD driver (LD Driver, fig. 2).

Regarding claim 10, Araki teaches the first LD light source (1, fig. 4) further includes a capacitor (10, fig. 4) connected in parallel to the series connection of the LD and the electronic

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switch (first LD light source 1 includes a capacitor 10 that is connected in parallel to the series connection of the LD and the electronic switch 4, as it is shown in fig. 4).

Regarding claim 11, Araki teaches the LD driver (LD Driver, fig. 2 and 3, fig. 4) includes a controller (27, fig. 2 and 4, fig. 4) operable to generate the control signal in response to a reception of a data signal (Data, fig. 2) indicative of data bit (col. 4, lines 44-59) to be optically communicated by the LD system (25, fig. 2 and 1, fig. 4).

Regarding claim 12, Araki teaches the controller (27, fig. 2 and 4, fig. 4) is connected to an input signal terminal of the electronic switch (5-1, 5-2, fig. 4).

Regarding claim 13, Araki teaches a controller (27, fig. 2) operable to generate the control signal as directed by the LD driver (LD Driver, fig. 2), wherein the LD driver directs the controller to generate the control signal in response to a reception of a data signal (Data, fig. 2) indicative of data bit (col. 1, lines 65-67, col. 2, lines 1-5, col. 4, lines 44-59) to be optically communicated to the LD system (25, fig. 2).

Regarding claim 14, Araki teaches the controller (27, fig. 2 and 4, fig. 4) is connected to an input signal terminal of the electronic switch (6-1, 5-1, 5-2, fig. 4).

Regarding claims 15-16, Araki teaches transitioning the LD system between a first illumination state and a second illumination state (col. 1, lines 5-9, note that the transmission system is capable of selecting at least one laser diode LD out of a multichannel LD array and driving it, therefore, providing a transition state between a first illumination and a second illumination), wherein the first illumination state includes a first transmission of a first light output (for example, in a first illumination state, the first LD transmits a first light output), and the second illumination state includes the first transmission of the first light output and a second

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transmission of a second light output (for example, in a second illumination state, when both the first and second LD light sources transmit respective first and second light output signals); optically communicating a first data bit upon each transition of the LD system from the first illumination state to the second illumination state (upon each transition state of respective LDs, for example, when transitioning from a first illumination state to a second illumination state, a data bit (or a first data bit) can be transmitted optically); and optically communicating a second data bit upon each transition of the LD system from the second illumination state to the first illumination state (note that when switching or transitioning from a second illumination state back to a first illumination state, a data bit (or a second data bit) can be transmitted optically. As to claim 16, Araki further teaches means for transitioning (6-1, 5-1, 5-2, fig. 4) between a first and second illumination states (col. 3, lines 31-45), and means for optically (25, 28, fig. 2 and LDs, fig. 4) communicating a first and a second data signal (col. 2, lines 35-40, col. 3, lines 32-41 and Data, fig. 4).

3. Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034. The examiner can normally be reached on 9 to 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. R. Sedighian/  
Primary Examiner, Art Unit 2613